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THE EAST RIVER BRIDGE.

ITS HISTORY AND CONSTRUCTION—ADVOCATED BY THE TRIBUNE
THIRTY-FOUR YEARS AGO—DIFFICULTIES OVERCOME—
THE ROEBLINGS' CONNECTION WITH THE ENTER-
PRISE—INTERESTING INCIDENTS.

The origin of suspension bridges is unknown. One in China is said to date back 2,000 years, and another in Thibet, India, to the year 65 A. D. Humboldt found rudely constructed suspension bridges in South America. In Europe they are common, but the system has been brought to the highest degree of perfection in this country. The application of the suspension system to bridging the East River was the subject of more or less discussion in this city and Brooklyn for at least over half a century before the work was begun. In 1819 an engineer by the name of Pope published an octavo volume on Bridge Architecture, in which he advocated spanning the East River by a single arch. The matter, however, did not attract much

attention until it was vigorously advocated in *The Tribune* in 1849. Numerous articles were printed on the subject, one of which appeared in October, 1849, and was as follows:—

“A BRIDGE TO BROOKLYN.—

The great project of municipal improvement now occupying public attention in this city and Brooklyn is the building of a splendid bridge connecting the two shores of the East River, and thus making New York and Brooklyn emphatically one. All jealousy between New York and Brooklyn is preposterous and absurd, and is never seriously thought of, save by a few speculators whose interests are concerned in keeping alive such feelings. It is in the inevitable course of events that the sea-

ward point of New York Island should constantly be overrun with the pressure of business and population and should be seeking outlets for the excess in every possible direction. The great natural remedy for this commercial and populative plethora is Brooklyn. . . . Ferries are rapidly becoming unequal to the immense and swiftly increasing intercourse between counting-house and home to so many thousands of our citizens. The only thing to be thought of is a Bridge built from some high point in New York to another in Brooklyn—thus permitting vessels of every kind to pass freely under at all times, and affording passage to a steady stream of vehicles and pedestrians. Such a bridge would become instantly an immense and important thoroughfare, second scarcely to Broadway itself."

A Free Bridge Wanted.

In various other articles the project was advocated. The position was taken that the Bridge should be free, and that upon its completion the two cities should be united in one municipality. On October 29th, 1849, it was stated in *The Tribune* that the Bridge should be 100 feet wide, and "to make it easily accessible it should start at a distance of some 1,500 feet from the shore on the New York side. It should be entirely free, as well for carriage as for foot passengers." On Christmas night of 1849 a gale caused the water in the East River to become so low that ferry-boats went aground while crossing, and travel was entirely stopped from 8 p. m. to 9 a. m. Thousands of men, women and children remained about the ferry-houses all night, waiting for the water to return so that the boats could run again; and many a Christmas entertain-

ment was spoiled in consequence. After that event there was renewed and vigorous discussion of the Bridge project, and estimates were made of its cost. One engineer, whose estimate was published in *The Tribune*, thought that it could be built for about the same cost as the High Bridge over the Harlem River. No practical steps were taken toward erecting a bridge until 1865.

Mr. Roebling's Early Interest in the Enterprise.

John A. Roebling, of Trenton, N. J., the distinguished engineer, was the only member of his profession in this country who, thirty years ago, had a thorough practical knowledge of the suspension system of bridging. He first became interested in the subject of bridging the East River, according to a member of his family, in 1853. In the month of February in that year he was detained with his wife and son, Washington, then a lad of fifteen years, on a ferry-boat in the East River for several hours, while the boat drifted helplessly about in the ice. He is said to have resolved at that time to build a bridge across the river. Not long afterward a letter from him discussing the feasibility of the project was published.

The matter slumbered until 1865, at which time Mr. Roebling was engaged in building the Covington and Cincinnati Suspension Bridge. In that year Oliver R. Ingersoll, of Brooklyn, addressed a letter to Mr. Roebling asking for an estimate of the cost of a suspension bridge across the East River. According to testimony given by Mr. Ingersoll before a committee of the Legislature, he received a letter from Mr. Roebling in 1866, offering to build a double suspension

bridge 200 feet high, with one roadway for passengers and another for cars, at a cost of \$4,000,000. He interested Granville T. Jenks in the matter, and the plans and specifications were procured. About the same time S. B. Chittenden caused to be published in a local magazine an article on a suppositious bridge over the East River and this led Mr. William C. Kingsley, then a rich contractor, to become interested in the project. He also consulted with Engineer Roebling on the matter. Whether it was the plans procured by Mr. Kingsley or those secured by Mr. Ingersoll that were sent to Henry C. Murphy, then a State Senator, and caused him to take action on the matter, is a question now in dispute. Mr. Ingersoll has once testified that he sent his plans along with the draft of a bill to incorporate a company, of which Mr. Ingersoll and friends should be members, to build a bridge.

The New York Bridge Company.

Mr. Murphy introduced the bill in 1867, but Mr. Ingersoll's name was not among those mentioned in the act which became a law in the same year. A company was formed consisting of John T. Hoffman, Simeon B. Chittenden, John Roach, Henry E. Pierrepont, and many others some of whom afterward attained distinction as members of the Tweed Ring. The cities of New York and Brooklyn were authorized to subscribe to the capital stock such amounts as two-thirds of their Common Councils, respectively, should determine.

Under the name of the New York Bridge Company the work was prosecuted until 1874, when a law was passed by which the control of the erection and completion of the Bridge was invested in the

two cities. Eight trustees for New York are appointed every two years by the Mayor, Controller and President of the Board of Aldermen, and eight for Brooklyn by the Mayor, Controller and Auditor of that city. The Mayors and Controllers are *ex-officio* trustees. In June next the terms of all of the present trustees, except the *ex-officio* members, will expire. When the old bridge company was dissolved in 1875 the money subscribed by individuals was returned to them with interest. The cost of the Bridge was limited to \$8,000,000, one-third of which amount was to be furnished by New York and two-thirds by Brooklyn, it being considered that the latter city would derive so much greater benefit from the completed structure. The original estimate for the Bridge was \$7,000,000. The total cost will be about \$16,000,000.

The Death of the elder Roebling.

As soon as the New York Bridge Company was formed under the act of 1867, John A. Roebling was employed as chief engineer, and his son, Colonel Washington A. Roebling, as assistant. The young man, who served honorably in the war, had been associated with his father in the erection of the Cincinnati Bridge. When that was finished he went to Europe to collect the latest scientific information upon the subject of pneumatic foundations, for use in overcoming the difficulties of securing foundations for the great piers of the Bridge. He returned to this country in February, 1869, and selected his present home on Columbia Heights where he has lived the greater part of the time for fourteen years. From his window he can view the structure, which he has been unable personally to in-

spect since 1872, because of a peculiar disease he contracted in the prosecution of the work at that time. His mind has not abated in vigor, and he has full control of every part of his body, and can walk about the house, but he is unable to talk or listen save for a short time. When he exerts himself he has a sudden attack of weakness that prostrates him. He has been the chief engineer of the Bridge since the death of his father in 1869.

The elder Roebling drew the original plans and estimates, which were approved by General Newton at the head of a Commission of Engineers, appointed by John A. Rawlins, Secretary of War, in 1869. After a Committee of the Chamber of Commerce, consisting of Henry Worthington, Sinclair Tousey and George Opdyke, had approved the plans, Congress passed an act authorizing the construction of the Bridge. The elder Roebling made the initial surveys. While standing on a string-piece of the pier next to Fulton Ferry slip, in 1869, fixing a location for the Brooklyn tower, a ferry-boat in entering the slip drove the fenders against the pier so as to crush the engineer's foot. He was a firm believer in hydropathy, and on going to bed he put his injured foot beneath a faucet of running cold water, and allowed it to remain there until over chilled. He died sixteen days later from lockjaw. Not a stroke of work had then been done on the Bridge. The plans were most general in character, the details not having been considered. They have been matured by Mr. Roebling's son, and executed by his assistants, C. C. Martin, Colonel W. H. Paine, Francis Collingwood, George W. McNulty and S. R. Probasco, and by E.

F. Farrington, master mechanic. Many new problems in bridge architecture have been solved in erecting this bridge.

The Caisson Work.

The work of construction began on January 3rd, 1870. The greatest difficulty was to secure firm foundations for the towers. To build these foundations below the level of the bed of the river was a work of great magnitude. Wooden caissons were used to support the towers of the bridge. A caisson is merely a great box bottom turned up. The Brooklyn caisson was fifteen feet thick on the top, of large, solid yellow pine timbers, and the sides were nine feet thick and nine feet high. The measurement across the box from edge to edge was 102x168 feet. It was divided into six compartments which were connected by means of doors. This great box was made watertight and then anchored on the spot on which the tower was to stand. The caisson was protected from the river by a coffer-dam of piles and sheeting. The work of building the tower on the caisson was at once begun and continued until enough weight was on top of it to keep it on the river bottom. There were large wrought-iron tubes or shafts in the roof of the caisson through which earth and stones excavated on the inside could be taken out, and there was an air-lock for persons to enter the caisson.

When it was sunk on the river bottom the water was forced out of the caisson by compressed air, and men could go in and work. One pound of air pressure equals two feet of tide water, so for every two feet the caisson was lowered, one pound had to be added to the pressure inside. Gauges in the

engine-room above indicated the height of the tide and the pressure of air. The highest pressure attained in the caisson was 34 pounds to the square inch, in addition to atmospheric pressure. At that pressure a man could not whistle, and a candle blown out would immediately ignite again. Fresh water springs appeared. Beneath this caisson blasting and excavation went on for months, when a depth of 45 feet was reached, and the caisson was then settled on rocky foundation. The inside was then filled with broken stone and concrete until the whole thing was a solid mass; and then the work of erecting the tower went on rapidly.

Solving a Great Engineering Problem.

Greater difficulty was encountered on the New York side, and the caisson was made stronger and bigger, and had to be sunk to a depth of seventy-eight feet. Even at that depth solid rock was not discovered. But jagged points of rock stuck up here and there, amid a bed of quicksand. The points of the ledge which appeared only under one end of the caisson were levelled off and the quicksand was confined within a wall of concrete, the whole area of the caisson was filled with the same material, after which the tower was erected and finished like the one in Brooklyn.

There were many interesting incidents in the work of building the foundations. The pressure of the compressed air would sometimes tilt up a caisson and a portion of the air would escape, throwing up a large column of water fifty to sixty feet high. One Sunday morning a neglectful watchman caused a blow-out which covered the adjoining buildings and

shipping with a coat of mud and injured two or three persons. Under extreme pressure some of the workmen became subject to certain physical derangements which have received the name of caisson disease. The Brooklyn caisson caught fire several times and twice had to be flooded with water. In December, 1870, a careless laborer placed a lighted candle on a shelf in close proximity to the oakum caulking of a timber joint, which ignited, and under the pressure the fire made its way into the timber and out of sight. As the pressure was all outward no flame or smoke could be seen in the caisson, and it was some time before the fire was discovered. Colonel Roebling was summoned and he entered the caisson at 6 o'clock, p. m., and did not leave it until 5 a. m. Overwork and anxiety, in addition to the many hours in the compressed air, had its effect, and he was partially paralyzed before he reached home. This was the beginning of the disease that has so long prostrated him.

The Towers and Anchorages.

The towers, built of granite brought from Maine, are 276 feet 9 inches above high-water mark. The Brooklyn tower reached its full height in May, 1875, and its New York mate in July, 1876. The New York tower above the top of the caisson weighs 93,000 tons. The firmness of the foundation is shown in the fact that the tower has not settled two inches. At a height of 119 feet there are two arched openings in each tower, through which will pass the streams of travel. On the top of the tower are saddle-plates, huge iron castings, on which rest the weight of the cables.

The cables are fastened in an-

chorages 930 feet distant from the towers. The anchorages are built of stone, and are 129 by 119 feet at the base and 89 feet high. Over the top of them run the roadways. Imbedded in the two anchorages are huge plates of iron weighing twenty-three tons each, to which are fastened iron bars formed into chains, at the end of which are the cables that hold up the suspended part of the bridge. There are vaults in the anchorages, where the cables join the anchor chains, and they can be inspected at any time by the engineers. The remaining stone work of the bridge consists of granite approaches, which are lofty viaducts. The Brooklyn approach begins at Sands St., and it is 971 feet long to the anchorage. The grade is two feet nine inches in each 100 feet. In this distance, Prospect, Main and York Streets are spanned by iron bridges. The New York approach is 1,562 feet long from Chatham St. to the anchorage. The streets are spanned by stone arches, except at Franklin square, where an iron bridge crosses over the station of the elevated railway. Beneath the arches of the approaches are spaces which will be utilized as warehouses. At each end of the bridge are station houses of iron and glass, from which the cars will run.

Making the Cables.

After the towers were completed the next engineering problem was to get the wires over them. The cables could not be made and then lifted into place. The first wire was carried across by a scow on August 14th, 1876. It was lifted into place over the towers and fastened to the anchorages. A second wire was then run across and the two were fastened together,

making an endless wire running over driving wheels. It was then an easy matter to run across other wires, and cable-making really began on June 11th, 1877. On Aug. 25th, 1876, E. F. Farrington, the master mechanic, crossed the river in a rigger's chair, which was attached to the "traveler" wire rope. A foot-bridge running over the top of the towers was stretched across the river to assist in making the cables. That bridge was four feet wide and was laid on two small cables 200 feet high. Two five-eighths-inch wire ropes served as hand-rails to this "pathway in the sky." Many persons made the perilous trip over it while it was in existence.

The making of the strands for the cables, which were begun on June 11th, 1877, was not completed until October 15th, 1878. Each of the four cables contains 5,296 parallel (not twisted) galvanized steel, oil-coated wires, closely wrapped to a solid cylinder, and is 15 $\frac{3}{4}$ inches in diameter. So many wires could not be handled at once, so that each cable is divided into 19 strands. When twelve strands were finished in each cable, seven of the central ones were clamped into the form of a small cable nine inches in diameter. This was made into the center core. On June 14th, 1878, the first serious accident in the operations of spanning the river occurred. A strand was let loose at the New York anchorage. It swept over the top of the tower and into the river, killing two men and injuring three more. Altogether some twenty persons have been killed during the erection of the bridge.

One of the Bridge Frauds.

In the course of the delivery of

the wire in the bridge yard it was carefully tested, and what failed to come up to the standard was rejected. It was afterward found that some of the rejected wire had again been delivered and was admitted into the work. Just how much of this was used no one can tell, but the engineers assert that there is enough extra strength in the cables to offset any weakness from this cause.

When the cables were ready for their loads, suspended bands made of wrought iron were fastened on at intervals of seven and one-half feet. To these bands were attached suspender ropes made of sheet wires. These ropes are made to hold 100 tons each, but not more than 10 tons weight will come upon one of them. The suspender ropes hold up the steel structure which forms the roadways.

On the approaches the width of the bridge is 100 feet. Here the wagon ways are paved with Belgian blocks, and the footway, which is only three feet above the roadways, has an asphalt pavement. But from anchorage to anchorage the bridge is different. It is a deft combination of steel beams, trusses, girders and chords, 85 feet wide, floored with timber except in the space reserved for the railway tracks. The total weight of steel in the bridge is 6,620 tons. The great delay in the delivery of this steel according to contract postponed the completion of the bridge for nearly one year.

As now completed there are five parallel avenues on the bridge. The outer two, nineteen feet wide each, are devoted to vehicles. In the center is an elevated foot-path fifteen and one-half feet wide. On either side of this are the railway tracks,—one for cars going to Brooklyn and one for those coming to New York.

Capacity of the Bridge for Travel.

The promenade has a capacity, if persons move at the rate of 200 feet per minute, of allowing 45,000 persons to pass over every hour. The roadway will admit the passage of 1,440 vehicles per hour of an average weight of $3\frac{1}{2}$ tons each, estimating three moving vehicles in every 100 feet. The bridge will sustain 10,000 soldiers marching, better than any ordinary bridge.

The cars are to be propelled by an endless chain, but when they reach the center of the main span they will run to the end by their own gravity and momentum, being under the control of brakes. Passengers will get in at one end and will be unable to get out until they reach the other end of the bridge. It is calculated that eighty cars, such as are used on the elevated roads, can be kept in operation at once, twenty of which will be on the bridge at one time. Each car can accommodate 100 passengers, and 80,000 persons can be taken across in an hour.

The total length of the bridge is 5,989 feet. The length of the river span is 1,595 feet, and at the center it will be 135 feet above high water in summer, and 138 feet in winter, the difference being caused by the effect of the heat and cold on the steel. The wind blowing at a velocity of 160 miles an hour would not hurt the bridge. The greatest velocity of the wind here is 76 miles an hour. The center of the suspended structure is 15 feet higher than the roadways of the towers. Not over 3 per cent. of the vessels that enter this port would have to strike their top-masts in passing under the bridge. From anchorage to anchorage the bridge is 3,460 feet long, and the total weight of the suspended structure is 17,780 tons. The cables, Chief Engineer Roe-

bling says, are strong enough to pull up the anchorages, which weigh 60,000 tons each. The bridge is to be lighted by 100 electric lights.

Opposition to the Undertaking.

Like all great local enterprises the bridge has met stout opposition. A memorial signed by 200 leading citizens was sent to the Legislature in 1879 asking that the work be stopped, that the bridge would obstruct navigation and would be useless. A long investigation followed without any

particular result. In 1873, under the pressure of public opinion and as the result of an investigation, Mr. Kingsley resigned the office of Superintendent. The management, however, was changed only in appearance, and the result was the passage of the act dissolving the original company. But the same managers were reappointed under the new law and they have managed to keep control ever since. By bad management and the delays caused by political opposition over \$1,000,000 at least has been added to the cost of the bridge.

From The Youth's Companion.

A BALLAD OF BRAVE WOMEN.

Off Swansea—January 27th, 1883.

With hiss and thunder and inner boom—
While through the darkness the great waves loom
And charge the rocks with the shock of doom—
A second sea is the hurricane's blast:
Its viewless billows are loud and vast,
By their strength great trees are upturn and downcast.
To-night falls many a goodly tree,
As many a ship, through the raging sea
Shall go with the strange sea-things to be.
At times through the hurry of clouds, the moon
Looks out aghast; but her face right soon
Is hidden again, and she seems to swoon.
Oh, the wind waves, and oh, the sea waves,
The gulfs of wind, and the sea-gulfs for graves,
Fast through the air how She flies and raves;
Raves with a magical, mad delight,
The viewless spirit of storm and night,
Heart of the wind, and soul of his might.
Hark to the voice which shouts from the sea,
The voice of a dreadful revelry!
The unseen hunters are out, and flee
Over the crests of the roaring deep,
Or they climb the ways that are wild and steep,
Or right through the heart of their light they leap.
Roar of the wind and roar of the waves,
And song and clamor of sea-filled caves,
What ship to-night such a tempest braves?

Yet see, ah, see, how a snake of light
Goes hissing and writhing up all the night,
While the cry, "*Going down!*" through the winds' mad might—

Through the roar of the winds and the waves together—
Is sent this way by the shrieking weather:
But to help on such night were a vain endeavor.

See a glare of torches; and married and single,
Men and women confusedly mingle—
You can hear the rush of their feet down the shingle.

Oh, salt and keen is the spray in their faces:
From the strength of the wind they reel in their paces
Catch hands to steady them there in their places.

How would a boat in such seas behave?
But the life-boat! Quick! The life-boat will save.
She is manned, with her crew of strong fellows, and brave.

See! They ride on the heights, in the deep valleys dip,
Until, with a cry which the winds outstrip,
Their boat is hurled on the sinking ship.

Its side is gored, for the sea to have way through—
"It is over!" they cried. "We have done all men may do!
Yet there's one chance left!" and themselves they threw

Right into the wrath of the sea and the wind!
It rages all round them, before, behind.
Their ears are deafened; their eyes are blind.

Then in the middlemost hell of the night,
Yea, in the innermost heart of the fight,
They strain and struggle with all their might—

With never a pause, while God's mercy they cry on,
Their teeth are set, and their muscles are iron—
Each man has the heart and the thews of a lion.

Wave spurns them to wave. They may do it! Who knows?
For shoreward the great tide towering goes,
And shoreward the great wind thundering blows,

But, no! See that wave, like a Fate bearing on!
It breaks them and passes. Two swimmers alone
Are seen in the wave, and their strength is nigh gone.

Quoth three soldiers on shore, "They must give up hope.
Neither swimmer nor boat with such surges could cope,
Nor could one stand steady to cast a rope.

"For he who would cast it must stand hip-high
In the trough of the sea, and be thrown thereby
On his face, never more to behold the sky."

But a woman stepped out from those gathered there,
And she said, "My life for their lives will I dare.
I pray for strength. God will hear my prayer."

And the light of her soul her eyes shone through,
But the men they jeered, and they cried, "Go to!
Can a woman do what we dare not do?"

Spake another woman—"I, too! We twain
Will do our best, strive with might and main,
And if what we do shall be done in vain,

"And the great sea have us to hold and hide,
It were surely better thus to have died
Than to live as these others. Haste! Haste!" she cried.

They seized a rope, and with no word more,
Fearless of death, down the steep of the shore
They dashed, right into the light and the roar

Of the giant waves, which sprang on them there,
As a beast of prey might spring from his lair,
While the roar of his triumph made deaf the air.

Oh, loud is the Death they hurry to meet—
The stones slip shrieking from under their feet—
They stagger, but fall not. Beat, mad billows, beat!

They raise their arms, with their soul's strength quivering—
They pause—"Will it reach?"—Then they shout and fling,
And straight as a stone driven forth by a sling—

Driven far afield by a master hand
The rope whizzes out from the seething strand:
A shout—"It is caught! For land, now, for land!"

A crash like thunder! They drop to their knees,
But they keep their hold in the under seas.
They rise. They pull. Nor falter, nor cease.

The strength of ten men have these women to-night,
And they shout with the rapturous sense of their might—
Shout, as men shout, when they revel in fight.

They reel, but they fall not. The rope winds in, fast;
Hark, hark! what a shout answers their shout, at last—
"That will do! We touch bottom! The danger is past!"

Then the women turn from the raging water
With the two they have snatched from its lust for slaughter,
But their feet flag, now, and their breath comes shorter.

Hardly they hear in their sea-dimmed ears
The sound of sobs, or the sound of cheers—
Their eyes are drowned, but with spray, not tears.

When deeds of valor, Coast vaunts over Coast—
As to which proved bravest, and which did most,
Two Swansea women shall be my toast.

Philip Bourke Marston.

From "Science" in N. Y. Independent.

DEEP-SEA FISHES.

The knowledge of the existence of deep-sea fishes is one of the recent discoveries of ichthyology. "It is only about twenty years ago," says a writer in the *London Quarterly Review*, in a review of Dr. Gunther's recent work on fishes, "that, from the evidence afforded by the anatomical structure of a few singular fishes, obtained in the North Atlantic, an opinion was expressed that these fishes inhabited great depths of the sea and that their organization was specially adapted for living under the physical abyssal conditions. These fishes agreed in the character of their connective tissue, which was so extremely weak as to yield to and to break under the slightest pressure, so that the greatest difficulty is experienced to preserve their body in its continuity. Another singular circumstance was that some specimens were picked up floating on the surface of the water, having met their death whilst engaged swallowing or digesting another fish, not much inferior or even superior in size to themselves.

"The first peculiarity was accounted for by the fact that, if these fishes really inhabited the great depth supposed, their removal from the enormous pressure under which they lived would be accompanied by such an expansion of the gases within their tissues as to rupture them and to cause a separation of the parts which had been held together by the pressure. The second circumstance was explained thus: A rap-torial fish, organized to live at a depth of between 500 to 600 fathoms, seizes another usually inhabiting a depth of between 300

to 500 fathoms. In its struggle to escape, the fish seized, nearly as large or strong as the attacking fish, carries the latter out of its depth into a higher stratum, where the diminished pressure causes such an expansion of gases as to make the destroyer, with its victim, rise with increasing rapidity toward the surface, which they reach dead or in a dying condition."

It was also shown that, as the same species and genera are found in very distinct parts of the globe, these deep-sea fishes are not limited in their range, and, consequently (as has since been admitted on other grounds), that the physical conditions of the ocean depths must be much alike all the world over. That the deep-sea fishes are not of a peculiar order, however peculiarly organized, but for the most part modified forms of surface-types, was another conclusion arrived at from the scattered evidence available before dredging at great depths was systematically practiced, and a conclusion that has since proved to be right. Nevertheless, it still remained to ascertain more precisely the bathymetrical horizons in which the different kinds lived; and this has been to some extent attained by observations made during the voyage of the *Challenger*, though these cannot be received without further critical examination; for, unfortunately, no precaution seems to have been taken to keep the mouth of the dredge closed during its descent or ascent, and, therefore, it is probable, if not in some cases certain, that fishes were occasionally entrapped while the machine was passing through the

surface water. On the other hand, the majority of the examples taken in the dredge literally offer internal evidence that they were inhabitants of the abysses, being so organized as to be unable to live near the surface, and, consequently, that they were captured at the greatest depth to which the dredge reached or nearly so.

The physical conditions of the deep-sea affecting the organization and distribution of these fishes, which it is so hard to realize to the mind, are thus formulated by our author:—

“1. *Absence of Sunlight*.—Probably the rays of the sun do not penetrate to and certainly do not extend beyond a depth of 200 fathoms; therefore, we may consider this to be the depth where the deep-sea fauna commences. Absence of light is, of necessity, accompanied by modifications of the organs of vision and by simplification of colors.

“2. *The Absence of Sunlight* is in some measure compensated for by the presence of phosphorescent light, produced by many marine animals and, also, by numerous deep-sea fishes.

“3. *Depression and Equality of the Temperature*.—At a depth of 500 fathoms the temperature of the water is already as low as 40° Fahr. and perfectly independent of the temperature of the surface water; and from the greatest depths upwards to about 1,000 fathoms the temperature is uniformly but a few degrees above freezing point. Temperature, therefore, ceases to offer an obstacle to the limited dispersal of deep-sea fishes.

“4. *The Increased Pressure of the Water*.—The pressure of the atmosphere on the level of the sea amounts to fifteen pounds per

square inch of the surface of the body of the animal; but the pressure amounts to a ton weight for every 1,000 fathoms of depth.

“5. *With the Sunlight Vegetable Life Ceases in the Depths of the Sea*.—All deep-sea fishes are, therefore, carnivorous; the most voracious feeding frequently on their offspring and the toothless kinds being nourished on the animalcules which live on the bottom or which ‘like a constant rain,’ settle down from the upper strata, toward the bottom of the sea.

“6. *The Perfect Quiet of the Water at Great Depths*.—The agitation of the water caused by the disturbances of the air does not extend beyond the depth of a few fathoms. Below this surface stratum there is no other movement except the quiet flow of ocean currents, and near the bottom of the deep sea the water is probably in a state of entire quiescence.”

Now the effect of these conditions in some part or parts of their structure is such that all deep-sea fishes are easily recognizable without positive evidence of their having been caught at a great depth; and in many of them the most striking characteristics relate to the pressure of the water they inhabit. Their bones and muscles are comparatively feebly developed. The former “have a fibrous, fissured, and cavernous texture; are light, with scarcely any calcareous matter, so that the point of a needle will readily penetrate them without breaking.” They are loosely attached to each other, the vertebræ especially; and, unless carefully handled, the body will almost fall to pieces. But that this is not the animal’s normal condition we may be well assured. It is due simply to the absence of the pressure, which keeps the whole

organization compact; for, as has just been stated, most of these fishes are rapacious, and, to indulge their voracity (enormous, as we shall presently see), they must execute rapid and powerful movements, to effect which their muscles must be as firm and their vertebrae as tautly braced as in their surface-swimming relatives. Marvelous as this is, it is far from being all that is marvelous in the structures of these dwellers in the profundities. We pass over the modifications of the eyes, for such are found in plenty of other groups of animals; but many of them are furnished with "more or less numerous, round, shining, mother-of-pearl colored bodies imbedded in the skin."

"As 'twere in scorn of eyes, reflecting gems."

Here let us again quote Dr. Gunther:

"These so-called phosphorescent or luminous organs are either larger bodies of an oval or irregularly elliptical shape placed on the head, in the vicinity of the eye, or smaller round globular bodies arranged symmetrically in series along the side of the body and tail, especially near the abdominal profile, less frequently along the back. . . . The organs of one kind consist of an anterior, biconvex lens-like body, which is transparent during life, simple, or composed of rods, and of a posterior chamber, which is filled with a transparent fluid and coated with a dark membrane, composed of hexagonal cells or of rods arranged as in the retina. . . . In the other kind the organ shows throughout a simply glandular structure, but apparently without an efferent duct. Branches of the spinal nerves run to each organ and are distributed over the retina-like

membrane or the glandular follicles. The former kind of organs are considered by some naturalists true organs of vision (accessory eyes), the functions of the latter being left unexplained by them."

There can, it seems, be no reasonable doubt that the function of both these kinds of organs has reference to the conditions of light under which the animals possessing them live; but further than that our judgment concerning them must at present be suspended. Dr. Gunther briefly states the three hypotheses which have been broached as possible. *First*, that both kinds are "accessory eyes;" to which there is the objection that several fishes, having well developed and even large eyes, perfectly adapted for seeing in the dark, are endowed with them, while in the other deep-sea fishes, without external eyes, they are absent. *Secondly*, that only the organs with a lenticular body and a retina-like membrane behind it are visual, but that the glandular organs are phosphorescent; and more may be said for this view than for any other, since the glandular organs are certainly luminous. *Thirdly*, that all the organs are producers of light, in which case it must proceed from the inner cavity and be emitted through the lens-like body as through a "bull's-eye" lantern. We hope we shall before long learn which of these suppositions may be adopted; but it will not be easy, we think, to decide the question. It might be different if we could but capture some of these remarkable beings alive and unhurt, and removing them to an aquarium, reproduce in a glass tank the conditions of the deep sea. That may in time come to pass; but, meanwhile, we must depend on

the investigations of anatomists.

Among other properties of the deep-sea fishes and in connection with their visual powers, it may be observed that they display few colors, and gay tints, would, indeed, be useless amid "the gloom of Tartarus profound." Their body is generally either black or silvery; but the silveryness has a most brilliant sheen, which is preserved even after years of immersion in spirit. A few are "picked out," as a coach-painter might say, with bright scarlet, either on the fin-rays or the filaments attached thereto. Such filaments, developed in connection with the fins or the end of the tail, are, we may remark, eminently characteristic of fishes that inhabit still water, and many of the deep-sea forms are adorned by them—a fact perfectly in accordance with the belief in the unvexed state of the nethermost abysses. Another remarkable property of some of these creatures

"That woo the slimy bottom of the deep,"

is the stomach, so capable of distension that it can hold a prey of twice the bulk of the destroyer. Figures of two of these are given by Dr. Gunther (pp. 311, 473), reproduced by Mr. Ford's beautiful plates in the "Proceedings of the Zoölogical Society" (1866, pl. ii, and 1864, pl. xxv). Even with

such a meal, they are not always content; for, though a fish seven inches and a half long was found in the latter specimen, itself not four inches in length, yet, we are told, "it was tempted to take a bait." One of the earliest recorded instances of this extraordinary voracity was observed by Mr. Johnson, who wrote as follows of a specimen (of another and very rare species, however), he procured at Madeira, which had been found floating on the surface:

"The man from whom I obtained it stated that he had a fish with two heads, two mouths, four eyes, and a tail growing out of the middle of the back, which had astonished the whole market; and the fishermen one and all declared they had never met anything like it before. At first sight it really did appear to be the monster described; but a short examination brought to light the fact that one fish had been swallowed by another, and that the features of the former were seen through the thin, extensible skin of the latter. On extracting the fish that had been swallowed, it proved . . . to have a diameter several times exceeding that of its enemy, whose stomach it had distended to an unnatural and painful degree."—*"Annals of Natural History,"* October, 1862, p. 277.

From The Missionary Herald, Boston, Mass., June, 1883

THE RESCUED GILBERT ISLANDERS.

The story of the Gilbert Islanders picked up at sea has awakened great interest wherever it has been received, and we are glad to present on the next page a picture of the group. The engraving is from a photograph taken in San Francisco, and well represents them as

they appeared when in that city. It is difficult to believe that, less than five years ago, these persons were half-naked savages. The face of the old man has suggested to several who have seen it the portrait of a good New England deacon. We have received from Rev.

HIRAM BINGHAM, of Honolulu, H. I., a brief account of these wanderers, as he learned it from them when they reached the Sandwich Islands. Mr. Bingham was the first person they met after their

rescue who could speak the Gilbert Island language.

It seems that they were sent by King Tem Benoka, of Apemama, to Maiana on a business errand. The party, consisting of nine men



THE RESCUED ISLANDERS.

and three women, sailed at midnight, probably about the middle of October last, reaching Maiana on the afternoon of the next day. After a stay of two weeks, they set out one forenoon to return.

The wind continuing light, they were not able to reach the island on the next day. The second morning dawned, but no land was to be seen. On that day, by an accident, one of their jars of water

was broken. They attempted to row to the eastward, toward a spot where they thought the appearance of the clouds indicated land. Failing to find land, they decided to return to Maiana, but only to discover that they had utterly lost their reckoning. On the eighth day their supply of water was gone. A slight rain enabled each one to collect about one quart of water. A month passed, but no rain; and although they were still supplied with food and cocoanut molasses, their thirst became so intense, that about two weeks after the slight rain spoken of, one of the parties, a woman died. The next day, two men, died. In the course of a week, seven out of the twelve had died from thirst. The day after the death of the seventh, there came a rain, and in their mats they caught water enough to satisfy their thirst. It was on the morning after this day, December 10th, 1882, that they sighted the *North-ern Light*, Captain SLOCUM, which took them to Yokohama, Japan.

Our readers will recall Captain Slocum's account of the party, and his statement that he never met a more devout band of Christians. They were sent by kind friends in Japan to San Francisco, where they were welcomed by many Christian people who saw in them delightful evidence of the elevating power of the gospel of Christ. A friend, in writing of their visit at the "Bay Conference," held in

the Plymouth Church, San Francisco, says: "They sang a hymn in their own language to a tune recognized as Ortonville (with variations). I think their visit made a deep impression, and that nothing was said at the meeting more convincing as to the power of the gospel of Christ."

Mr. Bingham, writing from Honolulu, March 22nd, says of them: "These people, four men and one woman, are now staying with us, in the hope of securing a passage to Apemama on the *Morning Star*, if not by some earlier opportunity. They seem eager for instruction, and we are daily striving to make them more and more acquainted with God's Word, and as I write, they are gathering in the parlor to receive their lesson in vocal music from Mrs. Bingham, that they may be able to sing Ortonville, and other tunes, with fewer variations. Two of the young men can read; one of them has with him a well-thumbed Gilbert Island Testament, going to pieces from being wet in the boat, where for some forty days they drifted those six hundred miles over the wide Pacific. The old man, a noble temperance hero, is trying to learn his alphabet. Compelled as we are, from poor health, to labor for the Gilbert Islanders at a distance from them, we esteem it a great privilege to have these strangers under our care and instruction."

WORK OF THE FISH COMMISSION.

THE OUTFIT OF THE ALBATROSS—ELECTRIC LIGHTS IN SUBMARINE
PHOTOGRAPHY—HABITS OF MIGRATORY FISH.

The United States Fish Commission steamer *Albatross* is lying at the Brooklyn Navy Yard receiv-

ing a fresh coat of paint and being cleaned and repaired generally after a cruise of several weeks along

the coast. It is not yet definitely decided, but it is probable, that the *Albatross* will receive orders to sail for Europe when the repairs are finished, to be present at the International Fishery Exhibition now in progress at London. The object in sending the *Albatross* to London will be to make an exhibit of her as a model in every respect for the purpose for which she was built. In case the vessel is sent to London she will lie at anchor in the Thames and be open for inspection during the remainder of the Exhibition.

A *Tribune* reporter yesterday found the *Albatross* high and dry on the docks, her sides and bottom shining in fresh paint. There were various signs of life on board notwithstanding the vessel was out of water. The officers were giving orders to the sailors, the cooks were scouring their saucepans and a few colored sailors were scrubbing the decks vigorously. The officers of the vessel are as follows:—Lieutenant Z. L. Tanner, commanding; Lieut. Seaton Schroeder, executive officer; paymaster, George H. Read; surgeon, C. G. Herndon; past assistant engineer, G. W. Baird; lieutenants, S. H. May and A. C. Baker.

The *Albatross* is in length 234 feet over all, with a beam of $27\frac{1}{2}$ feet, and a depth of hold of 16 feet 9 inches. She is brigantine-rigged, and is propelled by compound engines and twin screws. Her speed is about twelve knots an hour. The screws are arranged one on each side of the rudder and can be worked in opposite directions so as to turn the vessel squarely about in her length. The steering is done by steam. The vessel is constructed with a high poop-deck to enable her when going

astern to free herself of the heavy seas she might otherwise ship. The vessel is lighted by 130 of Edison's incandescent lamps of eight candle-power each. One of these lamps is attached to a flexible cable, and may be lowered into the sea to the depth of 500 fathoms. There are two of Dr. Moses' arc lights of 750 candle-power each, run off the Edison circuit, which is considered an important advance in electric lighting. Edison's Z dynamo, driven by an $8\frac{1}{2} \times 10$ engine, is used, the dynamo making 1,200 and the engine 300 revolutions a minute. The use of electricity in the scientific investigations of the vessel is yet purely experimental. The light has been used under the water to attract the fish, and has been found very useful for this purpose. At a depth of 150 fathoms, however, the pressure of the water is so great that the globe is broken, consequently it remains to perfect a globe that will withstand the great submarine pressure before the electric light can be used at a great depth.

The vessel is provided with two large laboratories, one on the spar deck in the amidship house, and the other on the deck immediately below. In these laboratories the reporter found yesterday specimens recently taken in soundings and dredgings in 1,200 fathoms of water. There were star fish, differing entirely from those common in shallow water, submarine worms of curious forms, crabs and various kinds of vertebrates and invertebrates. In one jar of alcohol were several young sharks which were taken alive from the mother. There were specimens of plants and of the mud at that depth—making in all a curious and inter-

esting collection. The specimens will be taken to the Smithsonian Institution at Washington.

There is also in the vessel a complete photographic apparatus for taking instantaneous photographs of specimens raised from the bottom of the sea. The photographic apparatus will be used also in taking micro-photographs of minute organisms by aid of the electric light lowered in the sea. Photographs of the intensity of light will be taken at different depths, the photographic plates being sent down, opened and closed, raised to the surface for comparison, and preserved to be sent to the Smithsonian Institution.

The steamer is equipped with two Herreshoff steam launches, one of which is sheathed with mahogany and carries her screw amidships beneath her keel, so that in heavy seas it will always be in the water. These boats are also arranged to be used as life-boats, and they are provided with the necessary apparatus for capturing cetaceans. A large Gloucester sailboat and several row-boats complete the squadron. There is on the vessel every appliance for catching fish.

The fish-food found in salt water is one of the principal points for investigation, which will be carried on by the use of electricity and the trawl. Much valuable hydrographic information is gained incidentally, as it is always necessary to ascertain the exact depth of water before the trawl is lowered, to accomplish which the vessel is furnished with the most perfect appliances for deep-sea soundings, steel wire—of which there are 8,000 fathoms—taking the place of the hemp rope. Accurate serial temperatures are observed, as well as the chemical constituents of the

water, their points having a direct bearing upon the subject under investigation.

The first work of the *Albatross* was done about two months ago off Cape Hatteras in investigating the movements of migratory fishes which make their first appearance on the coast in that vicinity. The object of the work was to gain knowledge that would lead to the discovery of the winter quarters of those fishes. It has always been alleged by scientists that mackerel hibernate every winter off Newfoundland. Professor Baird has maintained, on the contrary, that the mackerel are a migratory fish. The trip to Hatteras by the *Albatross* settled the question. The vessel lay off Hatteras until the mackerel appeared, and then followed them up along the coast. The shad, salmon, bluefish, menhaden and others appear on the coast in the spring, most of them in good condition, indicating good feeding grounds during the winter. After remaining some time in the shallow waters of the Atlantic seaboard, and its bays and rivers, they suddenly disappear, no one knows where. They reappear in the following spring. It has been settled that they do not visit any other coast in the meantime, and as they have never been seen on the surface after they have gone away, it follows that they hibernate at the sea bottom in a region where food is plentiful. If the *Albatross* discovers the winter resort of these fish it will only remain to take them at a season when they are not spawning, and are, in consequence, in fine condition.

The *Albatross* has been ordered to report at Washington for further orders June 15th.—*N. Y. Tribune*, June 4th, 1883.

PROF. JOSEPH HENRY AND THE SIGNAL SERVICE.

BY E. S. PORTER, D. D.

A statue in memory of Prof. Joseph Henry has just been unveiled. What the statue itself may be as a work of art we do not know. But the world knows that any material representation, be it marble or brass, local and measurable of a man whose fame is celebrated wherever the tick of a telegraph is heard, or the voice of a telephone resounds, must needs be very inadequate. And yet his fellow countrymen surely do honor to themselves when they erect monuments to perpetuate the fame of great writers, philosophers and teachers. The streets of Edinburgh are illustrated and illuminated by the marble forms and figures of Scott and Wilson and Playfair, and the missionary, Livingstone, and others who triumphed in the fields of literature, science, art and philanthropy. These all seem to say in chorus to all who behold them:—"Peace hath her victories no less renowned than war." In St. Paul's Cathedral, London, the sermons preached and the hymns sung are in honor of the Prince of Peace; but the walls of the vast structure and its alcoves are used in the main to show forth the military genius of Great Britain. Warriors look down upon the visitor as if to receive homage for their great achievements on sea and land. It has been ever thus, but it will not continue so forever. Men of thought will be honored no less than men of action, and the benefactors of mankind will have their laurel wreaths no less than they who have writ their deeds in blood. It is a good augury for any people, to show their disposition to extol the services of the pioneers of human

progress in all that constitutes christian civilization.

Prof. Henry was placed at the head of the Smithsonian Institute when first opened in Washington, D. C. At that time he enjoyed a distinction among the *savans* of the old world far greater than had been accorded to him here, where scientific experiments had not yet covered so large a field as they do now. It may perhaps be doubted whether American readers or students, as a class, know or appreciate the value of Prof. Henry's scientific labors and discoveries.—While principal of the Albany Academy, he constructed the famous horse-shoe magnets, without which Prof. Morse could not have operated an electrical telegraph. While connected as Chief, with the Natural Science Department at Princeton College, Prof. Henry extended his researches in magnetism and electricity, and by his papers published in this and other countries, contributed to bring on the new age, wherein all parts of the world are made adjacent and contiguous by the nerve-wires that transmit the magnetic messages ever upon them.

In June, 1858, I was sent to Washington on a special service for the American Bible Society. Having been a pupil of Prof. Henry at Princeton, I was glad to call upon him at the Smithsonian. He invited me to luncheon, after which he took me into a large lecture room, on one side of which hung an immense map of the United States. It was covered with bits of slight paper, of many colors, each color having a language of its own. "Here," said the Professor, "we are trying to

ascertain and determine the meteorological system or systems of our country. Through the telegraph instrument there in the corner we receive reports from all sections of the Union respecting the course of the winds, the state of the thermometer and barometer, and the gathering and progress of storms; in short, of everything that will help us ascertain, with something like certainty, the changes of the weather which may be soon expected. If we succeed in these experiments, they will prove to be of very great utility to agriculture and navigation. While the weather is commonly thought to be fickle, nevertheless we are learning that its variations are produced by fixed laws, which lead back to the study of natural causes not entirely beyond physical research."

Then taking in his hand a long slender index pointer, he stepped forward to the map and directed my attention to the recording papers, of many hues, fastened by pins to the map, as the telegraph signalled the places for their almost constant transpositions. And thus, then and there, I beheld the beginning of that signal service, which daily, all the year round, supplies the whole press of the United States with its weather news, which is born not of conjecture, but of scientific deductions from an immense mass of observations extending over a continent. Prof. Henry then proceeded to explain to me in brief the thermometrical and meteorological systems of different portions of our country and through differing seasons. He added that it would require long, patient and minute observation to reduce all the phenomena of earth and sky to a meteorological system. "One of the most active causes," said he, "in

producing sudden or very violent changes is electricity, which seems to flow hither or thither like tides, but without the regularity of tides. However, if we cannot comprehend causes, we can study their phenomena, and infer probable results as likely to occur, with very considerable regularity."

The Professor then gave some reasons for doubting whether western Kansas would have a sufficient rain-fall in the summer to make it a very safe region for agricultural investments. "During the early spring," said he, "the supply of moisture from the Pacific may be enough to pass over the mountains and reach the great inter-continental plains. As the spring recedes and summer comes on the moisture will be winnowed out by the mountain ranges, and then western Kansas must suffer more or less." What to Prof. Henry was scientific foresight has proved, on several occasions, to be verified history.

But my purpose in this sketch is simply to show that while Prof. Henry laid the foundations of the telegraphic system of the world, to him also is largely due the honor of having laid the foundations of our present signal service, as established at Washington. Prof. Henry, as all who knew him will bear witness, was a modest, retiring scholar. He loved genuine science, and he loved and honored God. For him the inspired Scriptures were full of life for the soul, and of medicine for the heart. In short, he was a thoroughly true man,—a natural philosopher, who valued facts above theories, and a sincere believer in Him who is the life and the light of men. Let his statue be altogether eloquent of real greatness.—*Christian Intelligencer*.

WORK AMONG SEAMEN.

CORRESPONDENCE, REPORTS, &c.

At Stations on the Foreign Field.

Labrador Mission.

BONNE ESPERANCE HARBOR.

Reports from this field reach us infrequently, but work is steadily carried on by faithful laborers among the fishermen and native population, and, in the winter, on behalf of the last named. Rev. Mr. MACKAY was the resident missionary from May to September, 1882, and during that time held regular Sunday services in the chapel, morning and evening, with a Bible-class and prayer-meeting in the afternoon. During the week a meeting was held for prayer and reading, classes being made up from the young people. The population at the Harbor decreases rather than otherwise, for "the young men with any push feel that they can never do much on the coast." Fisheries were poor there last summer, consequently vessels did not remain long, but each one, as it came, was visited, the sailors spoken to, and tracts and books given which were readily received. On the Sabbath the seamen came ashore and attended worship,—some took part in the prayer meetings and appreciated the privilege of joining in the worship of God.

"When Rev. Mr. Mackay wrote," continues the Treasurer of the Montreal Missionary Society at Montreal, Canada, which in conjunction with our own sustains the mission at the Harbor,—“Mr. and Mrs. ROGERS and a lady teacher entered on the work. These missionaries are from Newfoundland. . . . We have only heard from them there soon after their arrival, as all communication ceases in October.”

Germany.

HAMBURG.

The annual (printed) report of the British and American Sailors' Institute,

covering operations for 1882, has been delayed until quite recently, but is now in hand. Its retention was owing to the desire of the Institute Committee "to give as complete account as should be possible of the special effort recently made to reduce the mortgage debt on the building. This arose from an offer made in a most generous and sympathizing spirit by Messrs. JAMES CURRIE & Co., of Leith, Scotland, in May, 1882, to add one-fourth,—up to £250,—to any sum that could be raised for this purpose by the 31st of December of that year, subsequently extended to the 30th of June, 1883. It seemed to the Committee impossible, at first, to get together the £1,000 they required in order to have the full benefit of this offer. But others came forward with similar generosity,—they refer especially to the GENERAL STEAM NAVIGATION COMPANY and Mr. R. M. SLOMAN,—and the start was made which has issued in the complete success of this movement. The ladies put the finishing stroke to it in their Bazaar which was held in Easter week; and the Committee have now happily to report that they have received £250 from Messrs. Currie & Co., and £100 from Mr. Sloman, the condition on which this money was promised having been fulfilled. To these gentlemen the Committee beg to give thus publicly their warmest thanks, and to all others who have helped with their gifts. The final and very satisfactory result is that the debt upon the Institute will be reduced from 56,000 marks to 28,000 marks.*"

Belgium.

ANTWERP.

It is a pleasure to state that as a result of correspondence for some time past between our own, the BRITISH AND FOREIGN SAILORS' SOCIETY in London, England, and the ANTWERP SEAMEN'S FRIEND SOCIETY,—and in deference to the earnest wishes of the resident attendants upon the MARINERS' CHURCH AND INSTITUTE,

* A mark is one English shilling.

Rev. ARTHUR POTTS, for the past two years chaplain of our own and the London organization at this important station,—the third in the world in its numbers of shipping, (following London and New York),—will continue at Antwerp for at least another twelvemonth, in the same capacity. The chaplain speaks of much encouragement in his work, and the third Annual Report of the local Society (for 1882,) affords ample ground therefor. We summarize it:—

The year has been a quiet one. The Institute Building has been maintained in thorough repair, and has been made attractive to seamen. Fortnightly entertainments to sailors and their friends have been given in the large hall. Religious services, under the charge of chaplain Potts, have been well attended, the hall (church) being constantly utilized to its full capacity. The library, reading, billiard and smoking rooms have been extensively used, many sailors resorting thither. Twelve libraries (266 volumes) were shipped, a total of 24 libraries with 517 volumes,—besides many parcels of illustrated and miscellaneous papers; fifteen hundred volumes having been loaned out at the reading-room. About 10,000 sailors are estimated to have visited the rooms during the year.

Thanks are tendered to the two Societies which provide the chaplain's services, and an acknowledgment is made of fourteen bound volumes of the SAILORS' MAGAZINE received from the AMERICAN SEAMEN'S FRIEND SOCIETY for the Institute Library. It is added that coffee, tea and other refreshments are provided for seamen in the "coffee-room," at very moderate charges. A special fund has been started for the erection of a Sailors' Home, some of the foreign consuls interesting themselves in the matter.

On the whole, our readers may be assured, substantial and steady progress has been made in our work at Antwerp, during the year thus reported on.

France.

HAVRE.

We feel certain that our friends will be deeply interested in the first report submitted by the new missionary lately appointed, Mr. C. J. HEPPELL. He is rep-

resented as being very popular among sailors; surely, as our informant writes,—"a good sign." His report is to the end of 1882, as follows:—

The Port—His Way of Labor.

"This station not only includes the port of Havre, with its large docks and vast shipping, but also takes in Honfleur, on the east side of the Seine. Since coming here last April, I have endeavored as far as possible, to board all vessels coming into port, but the numbers being so great, I have found it quite impossible to reach all. Some of the steamers have over eighty hands, all told, so that it is nearly a day's work to have personal dealing with each one. I often have short services in the forecabin during the dinner hour. Still personal dealing is most essential. Often I am above four hours on board one vessel, my object being, to do all I can while on board, rather than hurry over a great number of vessels.

Fruitful Services on Shipboard.

"I have service every Sunday, at 10 a. m., in the saloon of the Royal Mail Steamers, from Southampton. These services first began with the men in the forecabin during their dinner hour, and at their request were changed to Sunday morning, the captain of each steamer kindly offering me the use of the saloon. We began with an attendance of sixteen men, which has increased to forty, and sometimes has reached eighty, when there are many English and American vessels in port. Captains, officers and men have shown me every kindness and help, in carrying on these services, which God has been pleased to make a means of salvation to several who have attended them.

Witnessing to His Work.

"I have had letters from America, from Reed City, and from Philadelphia, from New York, and from Halifax, N. S., also from captains of English steamers, 'thanking me for blessings received here, and praying that I may long be spared to do good to others, as I had done to them.' Some of those thus brought to the Lord, have since been gathered to their rest.

Utilizing Sea Captains—Extra Service.

"I have enrolled six captains as 'Missions to Seamen' helpers, and one associate: these were thoroughly godly men.

"After our Sunday morning service is over, I often have another service on board

some large vessel, where some of the officers and men from the Southampton steamers go with me, carrying my little harmonium for me, and help me both in the singing and responses.

Open Air Worship.

"During the autumn we had forty English fishing smacks here, every Sunday; we had some very interesting, hearty open air services on board, reminding me of my work at Whitby, Eng. Some hundreds of French people gathered on the quays listening to the music. They were most orderly and quiet during the whole time, and when I stepped on shore after the service was over, I was completely besieged for tracts in French; I am often asked for these as I go along the docks.

At the Reading-Room—Temperance Labor, etc., etc.

"Besides dealing with the men on board their vessels, I meet with them every night at the Reading-Rooms, where I have further conversation with them. Here they get, read and write their letters, and post them in the Rooms, stamps, paper, &c., being kept there for them. They also read the papers, books, &c., smoke, chat, or have their games, and often music. In fact they are quite at home there. The attendance has largely increased; we have temperance entertainments every Saturday night, at which 70 men have signed the pledge. These entertainments are also a counter attraction to the *cafés*, with the drink and its long train of evils. On Sunday evenings there is sacred music from 7.30 p. m. to 9 p. m., then we have a short service, closing up at 10 p. m., when it is time to go on board, without going into the *cafés*. There are often eighty men present.—Mrs. BERNAL, wife of H. B. M. Consul, takes a warm interest in all that is done here, and is ever ready to help in any way she can.

Summary of Work.

"Visited 686 vessels, 12,455 men; paid 278 visits to the Seamen's Reading-Rooms, attended by 10,469 men; held 193 services, 19 readings of the Scriptures, and 26 temperance meetings, gave 70 pledges, sold 20 Bibles and Testaments, 38 copies of 'Forms of Prayer for Use at Sea,' 3 copies of 'Lay Work in the Royal and Mercantile Navies,' distributed some thousands of tracts, &c., in various languages; at work, 2,136 hours.

MARSEILLES.

Acknowledging, under date of May 9th,

remittances for quarters ending December 31st, 1882, and March 31st, 1883, Rev. H. I. HUNTINGTON, chaplain, writes:—"The work here is far the most important and laborious of any port on the Mediterranean. * * * I am assisted by a Scripture reader, a young man of earnest piety and zeal, and who, having completed his studies at a Theological college, will soon receive orders. * * * We need to have more frequent services on board ships, as the English chapel is about four miles distant from the docks where the large vessels lie. The services at the Sailors' Home are well attended in the evening. In these I am occasionally aided by ministers of different denominations passing through the city."

Gibraltar.

We have been interested by a note from Rev. D. S. GOVETT, Archdeacon at G., formerly chaplain at our mission at Marseilles, France, to the effect that he, with others, is about establishing a sailors' mission at G. The project has been repeatedly and heartily endorsed by the Bishop of Gibraltar, and, it would appear, is one deserving execution. Last year ('82) the English speaking mercantile seamen in the port numbered 95,000, and they are increasing by some 5,000 to 6,000 per year. Up to this time nothing has been attempted for their spiritual interests while in harbor.

Italy.

NAPLES.

The Fourth Annual Report (for '82) states that H. B. M. Consul GRANT, at N., presiding over the Harbor Mission's annual meeting, stated that it is now a rare thing for him to have to exercise his consular authority in connection with seamen, so marked is the good effect of the spiritual services and other labor now put forth in their behalf.

Japan.

YOKOHAMA.

In the "Annual Report of the Evan-

gical Alliance of Japan for the year 1882," forwarded to us by Rev. W. T. AUSTEN, sailor missionary, we find the following statistics of his work for the year:—

Missionaries, 1; Services ashore and afloat, 423; Temperance Meetings, 61; Pledges taken, 48; Visits of seamen to Mission rooms, 5,679; Visits of officers to Mission rooms, 164; Visits to ships, hospitals and prisons, 296; Bibles and Testaments sold, 59; Number of conversions, 45.

The Evangelical Alliance comprises nineteen missions and churches in the Empire, of various denominations.—Rev. Mr. Austen's last report came to hand May 4th, and covers labor for the three months ending 31st March. He writes:—

Best Time to Reach the Men.

"Our best opportunities for reaching the seamen have been when they are gathered together in our fine mission rooms of an evening, when their working hours are over and leave is given them from their respective ships. We have held a large number of meetings for them at the Mission, for the purpose of preaching the Gospel, for prayer, for advocating total abstinence, for social entertainment, for the delivery of popular lectures, &c., all of which have proved successful in furthering the great object we have in view, viz., of bringing them to Christ.

Conversions to Christ.

"Some twenty-one have been hopefully converted, many others have been led to think seriously, while not a few who were already on the Lord's side have testified that they have been brought much nearer to Him as the result of our poor efforts. I have a great cause for thankfulness in the faithfulness of my dear wife who is proving herself a true helpmate in more than seconding my efforts to win souls.

A Service of Special Interest—Sailors Join the Church.

"On Sunday evening, January 28th,

we had a very interesting and solemn service at our rooms, when a number of seamen united with the Union church on a profession of their faith. They had previously been examined by the church officers, and a special session of the church was called to meet at the Seamen's Mission at eight o'clock, at the close of our usual Sunday evening service, when the Rev. J. DAVISON, of the M. E. church mission, the Rev. J. H. BALLAGH, of the R. D. church mission, and the Rev. H. Loomis received the candidates into church membership, one man having first to receive the rite of baptism. At the conclusion of this service the holy communion was administered to some fifty or sixty persons, the candidates included.

Testimony of Missionaries.

"Several missionary brethren at this meeting spoke of the great blessing that had come to them through the meetings they had attended from time to time at the Seamen's Mission. A large number of our American missionary brethren have from time to time attended our meetings, and have expressed their great interest in the work.

Revival Work Spreading.

"This revival which has been going on for six months past, has spread to the native churches, which have received large accessions of members, and evidences are multiplying on every hand of the fact that God's Spirit is being poured out as never before on this land of the rising sun, in answer to the prayers of his children.

Statistics.

"For the quarter these are as follows:— Meetings held, 153; visits to ships, 43; visits to hospitals, 23; visits to prisons, 18; bible classes, 11; conversions, 21; pledges, 17; bibles and testaments sold and given, 13; seamen's letters received and sent, 46; visits to reading-room, 1,648; attendance at meetings held at the Mission, 3,548."

At Ports in the United States.

Virginia.

NORFOLK.

Chaplain J. B. MERRITT's report for year ending April 1st, 1883, states that the Bethel services have been well attended, not a single one being omitted. Both

the shipping and the hospital have been regularly visited and the good seed has been scattered among the seamen, who seem highly to appreciate the work done for them. Prisoners in the city jail have been visited; temperance meetings have been frequently held and scores of sailors have signed the total abstinence pledge.

On all occasions seamen have been respectful, attentive and even cordial.

"My heart," he says, "goes out after them. I am glad to work for their welfare. May God give more and more power to help him to accomplish his salvation!"

"I have visited 2,511 vessels, distributed 33,984 pages of tracts, 3,316 seamen's papers, 2,095 other papers, 911 SAILORS' and other magazines, and 155 Bibles and Testaments. I have relieved the wants of thirty-four distressed seamen and have buried eleven."

North Carolina.

WILMINGTON.

In March, Capt. POTTER, missionary, visited forty vessels, as also the Sailor Boarding Houses and the Hospital. At the latter place, a dying colored seaman accepted Jesus as his Redeemer.

South Carolina.

CHARLESTON.

Rev. L. H. SHUCK, D. D., chaplain, in his quarterly report, ending March 31st., '83, states that services have been regularly maintained at the Bethel, and the chaplain has visited the shipping, the hospital and the jail. Through the kindness of one of the directors of the Port Society, pecuniary assistance has been rendered to the poor and the destitute. Tracts, Testaments and Bibles in various languages have been distributed and the usual number of the SAILOR'S MAGAZINE. The faithful mission colporteur, Mr. A. L. YATES, is at present in feeble health, and Mr. C. NELSON, a converted seaman, has been requested to assist in the work. Various religious denominations have been represented at the Bethel services on the Sabbath. The Sailor's Home has been repaired and arrangements have been made to open it at once, for the entertainment and comfort of seamen. The changes at the Home and its present accommodations are thus set forth in the *Charleston News and Courier*, of May 12th, '83:—

"It has been thoroughly cleaned and reprinted inside and will be painted and

repaired on the outside. All the rooms have been supplied with new furniture and bedding, and the establishment has been placed under the management of Capt. SAMUEL R. DAVIS, as superintendent, and of Mrs. S. C. CLARK, as matron. Capt. Davis, who comes from New York, has had thirty years' experience as a shipmaster, and ten years' experience as a hotel-keeper, and is consequently thoroughly competent for the work he has undertaken. Mrs. Clark is a lady of skill and experience, and thoroughly understands the difficult science of house-keeping. There are twenty sleeping rooms in the building with accommodations for about forty persons. The sleeping rooms are on the third floor, are all well ventilated and neatly furnished, and all open into a spacious hall which has been fitted up as a library and reading room, the library having been promised by the AMERICAN SEAMEN'S FRIEND SOCIETY.

"The mess-room on the second floor is furnished with a number of circular tables seating four persons each. The pantry and kitchen are on the same floor, and are both models of neatness and cleanliness. Sailors who may desire to obtain a decent and comfortable abiding place while on shore will find at this place a comfortable home, and at reasonable rates. In addition to this the Home will provide apartments for the masters and mates of vessels who may have their families with them. For the accommodation of these a separate dining-room neatly fitted up has been provided.

"The Home will supply a want long felt in the city. Vessels which arrive here during the summer months and have to go to the phosphate works up the river to load or discharge cargo cannot take their crews with them. The masters are compelled to board their men in the city, and have frequently to entrust them to the very sharks whose business is to steal seamen from one ship and sell them to another. Masters of vessels will find at the Sailors' Home, comfortable quarters, good wholesome fare and kind treatment for their men, who can, if they desire it, be quartered together, a large room having been fitted up for the purpose. For ships' crews under these circumstances arrangements can be made at reduced rates of boarding."

For The Sailors' Magazine.

Our Seafaring Men.

By this term I do not mean to be understood as intending all sorts of men who

spend their lives mostly on the sea,—but now I intend a certain class with whom I have been familiarly acquainted from my early years. I do not speak here of the common sailor who goes before the mast, in our steamers, and on our sailing vessels, for all their lives.

With this class I have no personal acquaintance, though I hail with great pleasure every movement for their temporal or spiritual good. But I refer to another class who never design to go before the mast for a longer time than may be necessary to attain sufficient knowledge to fit them to be masters or officers of steamers or sailing vessels. This class is numerous, even in our days, in all the maritime towns of New England.

As a rule, these men are not ignorant or debased, although many in the inland portions of our country suppose them to be so, judging from the specimens they have seen in our large cities of the common sailor. Those of whom I write take to the sea from choice or from necessity at an early age. As soon as they have acquired in our common and high schools a sufficient knowledge of Arithmetic, Grammar, Geography and Navigation, they ship off, "square rigging," hoping soon, by these menial steps, to become officers and masters. This class of seafaring men gain a living, and often a very comfortable one, for their large and respectable families. They are not regarded by us as a low and ignorant set who live in little huts on the sea shore, as some writers, indeed, would make them out to be.

Those in whom my sympathies are most deeply interested comprise the officers and masters of our steamers and sailing ships. They, like all seafaring men, are subjected to the hardships, dangers and trials incident to their calling. As a rule they have wives, children and pleasant homes to leave behind them, which the common sailor seldom has to care for. They have, too, a heavy weight of responsibility resting on them when on ship-

board, for not only the property of their employers, but the safety, comfort and lives of all on board depend on the skill and good judgment of the masters and officers as well as the prompt and ready obedience of the sailors. Their trials and privations are hard to bear, especially when starting out on a long voyage with a crew half foreign, and oft times unfitted for duty by strong drink. It is, of course, in cities that the sailor meets his greatest foe and is robbed of his courage and manhood and sent to sea half clothed and half crazed with rum.

Now it is for the masters and officers that I ask the prayers of all Christian readers of the MAGAZINE. It is to them we owe all our foreign and many of our domestic luxuries and comforts. What could the common sailor do in navigating a ship around the globe or across the ocean? Let us never forget how much we stand in debt to them, or how much we depend on them. They have but few comforts. It is true that they have time for reading and writing, but they enjoy few other privileges. I have seen some good libraries on board ship consisting of books of travels, history, astronomy and philosophy. I knew one officer, not then twenty, who had purchased and read six volumes of philosophy on one voyage to Smyrna. As a class they are intelligent, and possess more general knowledge than college students who come among us as school teachers.

And yet, however intelligent, honorable or useful they may be, they are not angels but *men*,—frail, sinful human beings like all the rest of our race, and need the Divine and holy influence of pure religion to make them what they need to be and may be, if they are brought under the influence of the Holy Spirit and the Bible. One of my intimate friends (not a professed Christian) told me that he read his Bible through in one voyage, perhaps for want of other reading, as Loan Libraries were not then in use. I have heard another ship-master say that

he had not been on a voyage since his conversion to Christ (which took place some years ago off Cape Horn) without having one or more of his officers or crew hopefully converted.

Oh! if all our ship-masters could say that, truly,—what a blessed improvement would be made among them! We should not so often be pained by hearing or reading of quarrels between officers and sailors, or cruel treatment and mutinies on shipboard.

Now, I by no means think all the complaints against ship-masters to be just or true. I know at least of one instance where mutiny had been caused wholly by avaricious motives, to get money, and the mutiny would have been carried out but for the faithfulness and kindness of a colored cook who overheard the plans of the mutineers and gave timely warning.

And there seems to me no more efficient and direct way of raising the character and promoting the comfort and interest of those who follow the sea than to labor for the spiritual benefit of this useful and important class of men for whom I am pleading. Make them what they should be and it may be that our sailors would become a more honorable and useful set of men. May the Spirit of God come down upon us and beget in our hearts a more earnest and persevering cry to Him in their behalf! Then life and property will be safer on the ocean, and the hearts of many on the land be happier and more grateful to Heaven when "the abundance of the sea shall be converted," and every sailor become a missionary of the Gospel to lands where men have not heard of a Divine Savior. M. S.

East Orleans, Mass., June, 1883.

U. S. Naval Academy, Annapolis; Md.

Chaplain McALISTER writes, June 5th, 1883:—

"Last Sunday morning at the close of the morning service, in the presence of the Secretary of the Navy and a number

of the Board of Visitors, I presented the books sent from the Rooms of the AMERICAN SEAMEN'S FRIEND SOCIETY. To every graduate of the Naval Academy this year, there was given a copy of the recent work of Rev. C. L. BRACE, entitled *Gesta Christi*, which we are confident will interest the young men and lead their studies in the right direction. It will assure them of thoughtful and prayerful Christian friends, and perhaps induce some of their number to commence and adorn the Christian life."

Sailors' Home, New York,

190 CHERRY STREET.

Report of F. Alexander, Lessee, for the month of

MAY, 1883.

Total arrivals.....	175
Deposited for safe keeping.....	\$1,770
of which \$674 was sent to relatives and friends, and \$943 was returned to depositors.	

Planets for July, 1883.

MERCURY during this month is a morning star until 6 o'clock on the evening of the 29th when it is in superior conjunction with the Sun; during the remaining two days of the month is an evening star; is at its greatest elongation at 2 o'clock on the morning of the 2nd, when it is $21^{\circ} 39'$ west of the Sun; is in conjunction with the Moon on the evening of the same day at 6h. 38m., being $17'$ north; at this time is eclipsed to all persons situated between the parallels of latitude 19° north and 33° south; is at its greatest brilliancy on the morning of the 5th, when it rises at 3h. 18m., and north of east $27^{\circ} 50'$; is twice in conjunction with Venus during this month, the first time at 11 o'clock on the evening of the 3rd, being $2^{\circ} 3'$ south, and then again at 11 o'clock on the forenoon of the 8th, being now $1^{\circ} 18'$ south; is in conjunction with Jupiter at 4 o'clock on the morning of the 19th, being $32'$ north.

VENUS is a morning star rising on the 1st at 3h. 7m., and north of east $29^{\circ} 42'$; is in conjunction with the Moon on the evening of the 2nd at 6h. 10m., being $2^{\circ} 31'$ north; is in conjunction with Jupiter at 8 o'clock on the forenoon of the 26th, being $10'$ north.

MARS is a morning star rising on the 1st at 1h. 38m. and north of east $24^{\circ} 21'$; is in conjunction with Saturn on the forenoon of the 20th at 8 o'clock, being $1^{\circ} 28'$ north; is in conjunction with the Moon on the afternoon of the 29th at 2h. 45m., being $2^{\circ} 44'$ north.

JUPITER is an evening star until the forenoon of the 5th at 10 o'clock; during the remainder of the month is a morning star; is in conjunc-

tion with the Moon at 2m. past noon on the 4th, being 4° 38' north.

SATURN is a morning star rising on the 1st at 2h. 26m. and north of east 25° 55'; is twice in conjunction with the Moon during this month, the first time on the evening of the 1st at 6h. 5m., being 22' north, at this time is eclipsed to all persons situated between the parallels of latitude 14° north and 43° south; and then again on the morning of the 29th at 5h. 13m., being 44' north, also at this time is eclipsed to all persons situated between 7° and 70° of south latitude.

New York University.

R. H. B.

Receipts for May, 1883.

MAINE.

Augusta, South Cong. ch. \$ 14 20

NEW HAMPSHIRE.

Atkinson, Cong. S. S., in full for lib'y 15 64
Concord, Ladies' Seamen's Friend Society, per Mrs. G. E. Jenks, for lib'y..... 20 00

VERMONT.

Bennington Centre, 1st Cong. ch. 12 50

MASSACHUSETTS.

Amherst, Officers and students of Amherst College..... 49 60
Boston, Schr. *John H. Chope*, Capt. Buell..... 2 00
East Longmeadow..... 18 00
East Medway..... 8 00
Fitchburg, Rev. John Woods and wife for lib'y..... 20 00
Bequest of Aaron Eaton, deceased, of Fitchburg, Mass., for a library, through Ezra R. Rockwood, ex'r., 20 00
Groton, Mrs. C. E. Blood, in full for lib'y..... 10 00
Longmeadow, Gents' Benev. Society. 18 15
Lowell, Sarah Stickney, for lib'y..... 20 00
Sewall Association, for lib'y..... 20 00
Middleboro, Methodist ch., for temperance..... 5 00
Monson, Cong. ch..... 25 00
Nantucket, S. S. of 1st Cong. ch., for lib'y..... 20 00
Peabody, South ch. and Soc'y..... 25 00
Randolph, Cong. S. S., for lib'y..... 20 00
Springfield, 1st Cong. ch..... 13 88
South Cong. ch..... 10 13
Southboro, Pilgrim ch. and Soc'y..... 11 78
Uxbridge, Bequest of Willard Judson, deceased, late of Uxbridge, Mass., per Jacob Taft, ex'r..... 500 00
Westfield, 2nd Cong. ch..... 17 35
Westhampton, Cong. ch., for lib'y... 21 50
A friend, for lib'y..... 20 00
Wilbraham, Cong. ch..... 10 00
Worcester, The Mission Workers of Salem Street ch., for lib'y..... 20 00

RHODE ISLAND.

Bristol, Mrs. M. De Wolf Rogers, for lib's..... 40 00

CONNECTICUT.

Ansonia, 1st Cong. ch..... 17 69
Enfield, 1st Cong. ch..... 29 60
Mount Carmel, Cong. ch..... 6 10

Southport, Southport Cong. ch. for lib's, seven of which in name of S. S., \$140; \$20 for lib'y as a memorial of Daniel G. Osborn, deceased, from his former S. S. class, and \$30 for lib'y in name of Carrie and Oliver Perry, per John H. Perry..... 186 50
Thomaston, Cong. ch..... 23 86
Waterbury, 2nd Cong. ch..... 100 00

NEW YORK.

Brooklyn, Church of the Pilgrims, of wh. R. P. Buck, \$100. and for lib's, viz.: \$20 from Misses C. L. and Evelina Smith for lib'y in memory of their mother, Mrs. Caroline A. Smith; \$20 from Mrs. R. F. Buck and Miss E. Buck; \$20 from Mrs. Dennis; \$60 from Mrs. Edwin Bulkley and family, and a friend \$20, through Rev. Dr. R. S. Storrs..... 469 24
Puritan Cong. ch..... 30 50
Mrs. M. L. Hollis..... 1 00
Florida, Pres. ch..... 6 00
Homer, Louisa A. Schermerhorn, for lib'y..... 20 00
Newburg, Union Pres. ch., through Rev. Mr. Savage..... 7 25
New York City, Frederick A. Libbey, for lib's..... 60 00
Solon Humphreys..... 50 00
Richard Irvin..... 25 00
William H. Osborn..... 25 00
Mrs. Valentine G. Hall..... 25 00
E. M. Archibald..... 20 00
Central Pres. ch., S. S. for lib'y in memoriam Miss Katie M. Hack, per A. Low..... 20 00
Wheeler de Forest Edwards..... 12 50
Walter Edwards..... 12 50
Mrs. E. M. Maxwell..... 10 00
Wm. H. Maxwell, M. D..... 10 00
Mrs. Dr. A. D. Wilson..... 10 00
Abiel Abbot..... 10 00
H. R. Winthrop..... 10 00
H. C. Fahnestock..... 10 00
M. W. Cooper..... 10 00
Samuel Wetmore..... 10 00
Jared Linsly, M. D..... 10 00
Brooks & Co..... 10 00
Capt. W. A. Rogers and crew of bark *Josephus*, for library work.. 10 00
Miniature Bethel ch..... 8 00
Davis & Benson..... 5 00
Mrs. L. Ilsley..... 5 00
W. W. Niles..... 5 00
P. Townsend..... 5 00
R. L. Belknap..... 5 00
Cephas Brainerd..... 5 00
A. F. Warburton..... 5 00
J. B. Hoyt..... 5 00
Capt. S. Watts, schr. *N. Bartlett*, for library work..... 5 00
Contents of a Library Collection-box, returned from sea..... 08
Palisades, Mrs. A. S. Gilman..... 10 00
Prattsburgh, Pres. ch..... 5 00
Rhinebeck, Thomas H. Suckley..... 100 00

NEW JERSEY.

Bloomfield, Rev. Dr. D. Kennedy, for the Kennedy Library..... 20 00
Montrose, Mrs. Theodosius Strang for lib'y..... 20 00
Newark, 3rd Pres. ch..... 84 81

PENNSYLVANIA.

Easton, A friend..... 5 00

\$2,563 45



"Cast thy bread upon the waters: for thou shalt find it after many days."—Ecc. II: 1.

Cap'n Sam's Little Sermon to the Boys.

"STRAIGHTENING OUT THE FURROWS," BY MRS. HARRIET A. CHEEVER.

"Well, I never saw anything like that Capt. Crofts round that old lady in all my life. He's dancing attendance from morning till night, and sakes alive! if he is n't tying on her sunbonnet for her.—Well I never! Wonder what 't would seem like to have my Billy grow up to be as attentive as that?" and the voice, half scornful at first, took on a longing, yearning expression, suggestive of tearful eyes, at the mention of "my Billy."

The speaker, Mrs. Bowles, lived in Seaport, usually spoken of as a fishing village, owing to the fact that many fishermen had lived there in years gone by; but the town was an old one, and possessing great natural attractions, and being a suburban town, many fine residences graced its winding avenue.

About two years before, a weather-beaten, sun-burned man, unmistakably a sailor, had bought a tasteful little cottage near the beach. This he had fitted up, beautified and embellished, until Mrs. Harris declared it to be a "perfect pink of a place."

Over this pretty house, Cap'n Sam, as the boys learned to call the genial man, had installed his white-haired mother as mistress and chief, and a more attentive,

loving son, it would appear, had never lived.

In a small barn at the rear of the cottage was kept a fine, steady horse, and a low basket carriage, and every fair day the Captain and his mother "went abroad," as Mrs. Bowles expressed it, on long, pleasant drives.

As we have hinted, Cap'n Sam was a great favorite among the boys of the place. Who else would harness up the sturdy horse into a big wagon, and give them such grand drives upon occasion? Then the great hickory and chestnut trees at the foot of his lot were free for the boys to visit as often as they liked, only they must never damage in any way the fine old branches; but when it came to spinning a yarn, ah, then! who so beguiling, nay, so perfectly bewitching, as the sea-bronzed man?

It had long ago become a subject for harmless bantering among the boys, and rather relished than otherwise by the captain, that he was gallant and unceasingly attentive to his "sweetheart." "My fair old sweetheart," he had once in their hearing called his mother, and they, of course, lively little wretches that they were, would never forget it.

But one day, the boys, quite a little crowd of them, found Cap'n Sam on the rocks at the beach. There were breakers that afternoon, and particularly at such times it was a favorite diversion with the sea-faring man, to sit high on the rocky beach and watch his "second love," the sounding sea.

It was at times like these the boys delighted in finding their old friend, and coaxing him for one of their "heart's delight," which he well knew meant a story of tempestuous seas or foreign lands.

But on this particular afternoon the captain was brooding somberly, a habit he often had when by himself, and this time he could n't throw off the mood, even at the approach of the merry boys.

In vain the better reared of them bantered, declaring "he'd had a jilting, but never mind, they expected to be jilted themselves in time to come;" while the less mannerly Billy Bowles had guessed "there'd been a candle lecture at home."

At length, partly emerging from his brown study, the captain said soberly:—

"Boys, do you know what I've been trying to do every day for the last two years?"

Oh, why, for certain, they knew all about it, they,—the merry youngsters of the town.

"Been a-courtin' chiefly," Jimmy Hollis observed, while Freddie Hollis remarked, "he'd worn himself all out a-pettin' his sweetheart."

The last opinion evidently struck the tender spot, and the boys found that for once Cap'n Sam was in no mood for jokes or banter, and being very quick to see which way the wind blew, the kind sailor a few minutes later addressed to a row of very serious young faces what one boy afterwards termed "a perfec' brick of a sermon."

"Boys," he said. "I've been trying every day of my life for the last two years to straighten out furrows,—and I can't do it!"

One boy turned his head in surprise

towards the captain's neatly kept place.

"Oh, I don't mean that kind, lad. I don't mean land furrows," continued the captain, so soberly that the attention of the boys became breathless as he went on:

"When I was a lad, about the age of you boys, I was what they called a 'hard case;' not exactly bad or vicious, but wayward and wild. Well, my dear old mother used to coax, pray, and punish,—my father was dead, making it all the harder for her, but she never got impatient. How in the world she bore with all my stubborn, vexing ways so patiently will always be to me one of the mysteries in life. I knew it was troubling her, knew it was changing her pretty face, making it look anxious and old. After a while, tiring of all restraint, I ran away, went off to sea;—and a rough time I had of it at first. Still I liked the water, and liked journeying around from place to place. Then I settled down to business in a foreign land, and soon became prosperous, and now began sending her something beside empty letters. And such beautiful letters as she always wrote me during those years of cruel absence. At length I noticed how longing they grew, longing for the presence of the son who used to try her so; and it awoke a corresponding longing in my own heart to go back to the dear waiting soul.

"So, when I could stand it no longer, I came back; and such a welcome, and such a surprise! My mother is not a very old lady, boys, but the first thing I noticed was the whiteness of her hair, and the deep furrows on her brow; and I knew I had helped blanch that hair to its snowy whiteness, and had drawn those lines in that smooth forehead. And those are the furrows I've been trying to straighten out.

"But last night, while mother was sleeping in her chair, I sat thinking it all over, and looked to see what progress I had made.

Her face was very peaceful, and the expression contented as possible, but the

furrows were still there! I had'nt succeeded in straightening them out,—and —I—never—shall! never!

“When they lay my mother,—my fair old sweetheart,—in her casket, there will be furrows in her brow; and I think it a wholesome lesson to teach you, that the neglect you offer your parents' counsels now, and the trouble you cause them, will abide, my lads, it will abide!”

“But,” broke in Freddie Hollis, with great troubled eyes, “I should think if you're so kind and good now, it need n't matter so much!”

“Ah, Freddie, my boy,” said the quavery voice of the strong man, “you cannot undo the past. You may do much to atone for it, do much to make the rough path smooth, but you can't straighten out the old furrows, my laddies, remember that!”

“Guess I'll go chop some wood mother spoke of, I'd most forgotten,” said lively Jimmy Hollis, in a strangely quiet tone for him.

“Yes, and I've got some errands to do!” suddenly remembered Billy Bowles.

“Touched and taken!” said the kindly captain to himself, as the boys tramped off, keeping step in a thoughtful, soldier-like way.

And Mrs. Bowles declared a fortnight afterward, that Billy was “really getting to be a comfort instead of a pest; guessed he was a-copying the captain, trying to be good to his ma,—Lord bless the dear, good man!”

Then Mrs. Hollis, meeting the captain about that time, remarked that Jimmy always *meant* to be a good boy, but he was actually *being* one now-a-days.—“Guess your stories they like so much have morals to them now and then,” added the gratified mother with a smile.

As Mrs. Hollis passed on, Capt. Sam, with folded arms and head bent down, said softly to himself:

“Well, I shall be thankful enough if word of mine will help the dear boys to keep the furrows away from their moth-

ers' brow: for once there, it is a difficult task straightening out the furrows!”

“Knock.”

Where am I to knock? “I am the door,” says the Savior. “No man cometh to the Father save by me.”

When am I to knock? “Now is the accepted time, now is the day of salvation;” “To-day, if you will hear his voice, harden not your heart.”

For what am I to knock? “Knock, and it shall be opened; seek, and ye shall find; ask, and ye shall receive.”

How shall I knock? “Come unto me all ye that labor and are heavy-laden and I will give you rest;” “Take my yoke upon you and learn of Me.”

You are to knock, then, at the door, which is Christ—now, for admission into the fold of Christ by coming to Christ by way of his commandments.

Little Gems for Little Folks.

1. Give God your heart; for He asks it, and it is His due.
2. Give Christ your burdens to carry; for they are too heavy for you.
3. Give yourself to God, to Father, Son, and Spirit—the three-one God.
4. Give all you have to God—your body and your soul, your time, your health, and your money, your hands, and feet, and eyes, and lips.
5. Give your heart and soul to the Holy Spirit; be made clean and new.—*Children's Friend.*

Parental Prayers.

At a meeting in London “for special prayer for the children of Christian parents,” the Rev. Marcus Rainsford delivered an address on the encouragements to parental prayers. In the course of his address he related the following circum-

stance as happening in Ireland:—At a meeting for united prayer an aged gentleman was pleading very earnestly for his own son, an abandoned prodigal. While in the act of prayer a drunken brawl was heard outside, which occasioned a temporary interruption of the service. After the audience had dispersed, and the minister of the chapel was alone in the vestry, a stranger knocked at the door; on being admitted he asked for advice and prayer, saying, that in company with six riotous companions, he was passing the church, when his attention was attracted by a loud voice within, and after listening awhile he exclaimed, with an oath,—“There’s my old father preaching!” Presently he heard the earnest prayer for himself. Even in the midst of his drunken revelry the arrow of conviction pierced his heart. He quitted his companions, and now came to seek the minister’s aid, exclaiming,—“My mother’s prayers of long ago are answered, as well as that prayer of my father.” Under God’s blessing this young man has become a converted man.”

Church Moorings.

An old sea captain was riding in the cars, and a young man sat down by his side. He said:—

“Young man, where are you going?”

“I am going to Philadelphia to live.”

“Have you letters of introduction?”

“Yes,” said the young man, and he pulled some of them out.

“Well,” said the old sea captain, “have you a church certificate?”

“O yes,” replied the young man; “I did not suppose you desired to look at that.”

“Yes,” said the sea captain, “I want to see that. As soon as you reach Philadelphia present that to some Christian Church. I am an old sailor, and I have been up and down in the world; and it is my rule, as soon as I can get into port,

to fasten my ship fore and aft to the wharf, although it may cost a little wharfage, rather than have my ship out in the stream, floating hither and thither with the tide.”—*Presbyterian*.

Sailors’ Lingo.

Most persons who have special trades are apt to introduce the technical expressions of their occupation into ordinary talk, especially when using metaphor. But this is notably a characteristic of the sailor. He much prefers his own “lingo” to the common language, and is more easily managed when spoken to in the former than in the latter.

During the war in Egypt the forces included a raval brigade composed of sailors, who were sometimes directed by military officers. The orders of the latter were often unintelligible to the Jack Tars, and some ludicrous hitches resulted. On one occasion a staff-officer tried in vain to get a battalion of sailors to manœuvre round the corner of a house.

He gave all the orthodox and regulation words of command—“Right wheel,” “Bring the left shoulder forward,” etc., but Jack remained obstinately fixed. At last a naval officer, who was standing by, on being appealed to, solved the question. “Get them round that house? Is that all you want? Here, Blue-jackets!” he cried, “luff, and weather that house!”

The sailors were round the corner in a twinkling.

American Seamen’s Friend Society.

R. P. BUCK, Esq., *President*.

Rev. S. H. HALL, D. D., *Secretary*.

WILLIAM C. STURGES, Esq., *Treasurer*.

L. P. HUBBARD, Esq., *Financial Agent and Assistant Treasurer*.

80 Wall Street, New York, N. Y., U. S. A.

District Secretary:—

Rev. S. W. HANKS, Cong’l House, Boston, Mass.
U. S. A.

AMERICAN SEAMEN'S FRIEND SOCIETY'S

REPORT OF NEW LOAN LIBRARIES

SHIPPED IN MARCH, APRIL AND MAY, 1883.

The whole number of new Loan Libraries sent to sea from the Rooms of the American Seamen's Friend Society at New York and at Boston, Mass., from 1858-9, to April 1st, 1883, was 7,764; and the reshipments of the same for the same period were 8,100; the total shipments aggregating 15,864. The number of volumes in these libraries was 419,420, and they were accessible, by original and reshipment, to 301,425 men. Nine hundred and forty-three libraries, with 33,948 volumes were placed upon vessels in the United States Navy, and in Naval Hospitals, and were accessible to 107,995 men.—One hundred and six libraries were placed in one hundred and six Stations of the United States Life Saving Service, containing 3,816 volumes, accessible to seven hundred and forty-two Keepers and surfmen.

MARCH, 1883.

During March 1883, thirty-one new loan libraries were sent to sea from our Rooms at New York and Boston. These were Nos. 7,674-7,689, inclusive, and Nos. 7,691-7,694, inclusive, at New York;—with Nos. 7,829, 7,833-7,841, inclusive, and No. 7,845, at Boston. Assignments of these libraries were made as follows:—

<i>No. of Library.</i>	<i>By whom furnished.</i>	<i>Where placed.</i>	<i>Bound for.</i>	<i>Men in Crew.</i>
7674..	Prof B. C. Blodgett, Northampton, Mass.	Ship Red Cross.....	Portland, Oregon..	22
7675..	Mrs. S. L. Wells, East Windsor, Conn.	Bark Spartan.....	Honolulu, H. I. . .	15
7676..	D. W. and Helen M. McWilliams, Brooklyn, N. Y., in memory of Walter McWilliams.....	" Jsaac Jackson.....	Callao.....	12
7677..	D. W. and Helen M. McWilliams, Brooklyn, N. Y., in memory of Walter McWilliams.....	" Carrie Winslow....	Portland, Oregon..	20
7678..	D. W. and Helen M. McWilliams, Brooklyn, N. Y., in memory of Normand McWilliams.....	" Arngunda.....	Java.....	20
7679..	Mrs. Mary M. Stone, New York City...	Ship Normandy.....	China and Japan..	26
7680..	Mary S. Stone, New York City.....	Bark Norway.....	E. London, Cape of Good Hope.....	15
7681..	Mission'y Ass'n Bethany Chapel, Brooklyn, N. Y.....	Ship Oakland.....	Zanzibar and Bombay,	23
7682..	Cong. ch. and Soc'y, Whitinsville, Mass.	" Paul Jones.....	Shanghae.....	25
7683..	" " " " " "	" St. Lucie.....	Portland, Oregon..	25
7684..	" " " " " "	" Vendome.....	Queenstown.....	22
7685..	Mrs. L. F. Cuyler, Brooklyn, N. Y., as Mary Cuyler Cheesman Library.....	" St. John.....	San Francisco.....	28
7686..	S. S. Union Pres. ch., Newburg, N. Y., as Lib'y No. 4, from the Helen Lefferts Prime Memorial Fund.....	" Parker M. Whitmore " "		30

AMERICAN SEAMEN'S FRIEND SOCIETY'S

<i>No. of Library.</i>	<i>By whom furnished.</i>	<i>Where placed.</i>	<i>Bound for.</i>	<i>Men in Crew.</i>
7387..	Cong. ch., and Soc'y, Whitinsville, Mass.	Bark Nehemiah Gibson..	Adelaide.....	15
7388..	Simeon Lester, New Rochelle, N. Y....	Ship Minnie H. Gerow...	Melbourne.....	22
7389..	A Friend, Southampton, L. I.....	" J. V. Troop.....	Japan.....	24
7691..	Rev. J. J. Dana, Alford, Mass., for the <i>Esther Dana library.</i>	Bark Vesuvius.....	San Francisco.....	15
7692..	1st Cong. ch., Milford, N. H.....	Bark Keverdale.....	Sydney.....	24
7693..	S. S. 1st Cong. ch., Meriden, Conn ..	Ship E. J. Spicer.....	Liverpool.....	20
7694..	Mrs. T. B. Meigs, New York City.....	Schr. Wm. Hays.....	Coastwise.....	9
7329..	Prospect St. Cong. ch., Cambridgeport, Mass.	Three mast schr. Ed- ward Fisher.....	Porto Rico.....	8
7833..	Union Cong. ch., Providence, R. I.....	Bark Wheatland.....	Madagascar.....	14
7834..	" " "	Brig Ida C.....	W. Indies.....	10
7835..	S. S. Cong. ch., Kingston, R. I.....	Schr. Rising Sun.....	Whaling.....	16
7836..	Cong. ch., Waltham, Mass.....	Ship Emily L. Whitney.	Australia.....	18
7837..	S. S. Cong. ch., Malden, Mass.....	Bark Arthur.....	Buenos Ayres.....	11
7838..	J. Tripp and J. Bancroft, Lowell, Mass.	" Freeman.....	New Zealand.....	15
7839..	2nd Cong. ch., Chicopee Falls, Mass...	" Carrie Wyman.....	Valparaiso.....	12
7840..	Salem St. Cong. ch., Worcester, Mass..	" H. E. Sleeper.....	Sydney, N. S. W..	12
7841..	Cong. ch. South Hadley, Mass.....	" Zalma.....	Hayti.....	10
7845..	Cong. ch. Scituate, Mass.....	Brig Jane Adeline.....	Madagascar.....	10

APRIL, 1883.

During April, 1883, twenty-four new loan libraries, were sent to sea from our Rooms at New York and Boston. These were Nos. 7,690 and 7,695-7,710, with Nos. 7,719, 7,720, and 7,721, at New York;—and Nos. 61, 7,842, 7,843, and 7,849, at Boston. Assignments of these libraries were made as follows:—

<i>No of Library.</i>	<i>By whom furnished.</i>	<i>Where placed.</i>	<i>Bound for.</i>	<i>Men in Crew.</i>
7690..	S. S. Mizpah Chapel, New York City...	Ship Wm. McGilvery....	San Francisco.....	22
7695..	"Lyons," New York City	" L. L. Sturges.....	Calcutta.....	28
7696..	J. E. McGregor, New York City	" Thiorva.....	Buenos Ayres and Acapulco.....	20
7697..	Mrs. J. O. Mahon, Washington, D. C., for library in memory of <i>Mrs. Edith Harland Child</i>	" Joseph B. Thomas.	San Francisco.....	28
7698..	Mrs. A. A. Cotes Winsor, Springfield, N. Y.	" Arabia.....	" "	30
7699..	Miss Emma Towne, East Orange, N. J.	" Southern Cross.....	Hong Kong.....	25
7700..	Miss M. J. Capron's S. S. class, 2nd Cong. ch., Attleboro, Mass.	Bark Itronus.....	Valparaiso.....	16
7701..	S. S. Cong. ch., Groton, Conn.	" Antioch.....	Sydney, N. S. W.	17
7702..	"G," Tarrytown, N. Y.	Ship Mount Washington.	Portland, Oregon..	28
7703..	Bethlehem Mission S. S., New York City,	" Minnie N. Watts...	" "	25
7704..	S. S. Ref. ch., Saugerties, N. Y.	Bark Moonbeam.....	Valparaiso.....	18
7705..	S. S. Central Pres. ch., New York City, for library in memory of <i>Miss Katie M. Hack</i>	Ship Ernest.....	London.....	25
7706..	Mrs. Theodosius Strong, South Orange, N. J.	" Ruby.....	"	22
7707..	Mission Workers, Salem St. Cong. ch., Worcester, Mass.	" Alex McNeil	Japan.....	17
7708..	Mrs. Edwin Bulkley and family, Brooklyn, N. Y.	Bark Belt.....	London.....	17
7709..	Mrs. Edwin Bulkley and family, Brooklyn, N. Y.	" I. Sargeant.....	Valparaiso.....	14
7710..	Rev. D. Kennedy, Bloomfield, N. J., for the <i>Kennedy Library</i>	Ship Newman Hall.....	Calcutta.....	22

QUARTERLY LOAN LIBRARY REPORT.

<i>No. of Library.</i>	<i>By whom furnished.</i>	<i>Where placed.</i>	<i>Bound for.</i>	<i>Men in Crew.</i>
7719..	F. A. Libbey, New York City.....	U. S. Life Saving Service		7
7720..	" " " "	" " " "		7
7721..	" " " "	" " " "		7
61..	Emily Rogers, Lowell, Mass	Bark Nellie May.....	Melbourne.....	12
7842..	S. S. Cong. ch., Warren, Mass.....	Brig McDermott.....	South America.....	10
7843..	S. S. Cong. ch., Auburn, Mass.....	" Eugene Hale.....	St. Thomas.....	9
7849..	S. S. Cong. ch., Randolph, Mass.....	Schr. C. R. Washington.	W. Indies.....	9

MAY, 1883.

During May, 1883, twenty-seven new loan libraries were sent to sea from our Rooms at New York and Boston. These were Nos. 7,711-7,718, inclusive, and Nos. 7,722-7,731, inclusive, at New York; with Nos. 7,844, 7,846-7,848, 7,850, 7,851, 7,852, 7,854, and 7,855, at Boston. Assignments of these libraries were made, as follows:—

<i>No. of Library.</i>	<i>By whom furnished.</i>	<i>Where placed.</i>	<i>Bound for.</i>	<i>Men in Crew.</i>
7711..	Mrs. Dennis, Brooklyn, N. Y.....	Ship Phineas Pendleton.	Anjier, E. I.....	25
7712..	Estate E. W. Fletcher, Whitinsville, Mass.....	Bark J. A. Ropes.....	Zanzibar.....	14
7713..	S. S. class D. G. Osborn, Cong. ch., Southport, Conn., for library in his memory	Ship Governor Robie....	San Francisco.....	24
7714..	Misses C. L. and Evelina Smith, Brooklyn, N. Y., for library in memory of Mrs. C. A. Smith, their mother.....	Bark George Moore.....	Java.....	17
7715..	Mrs. Edwin Bulkley and family, Brooklyn, N. Y.....	Ship L. Schepp.....	San Francisco....	28
7716..	Bequest of Aaron Eaton, Fitchburg, Mass.....	" Loanda.....	Calcutta.....	25
7717	Cong. ch., Southport, Conn., for S. S.	" Hercules.....	Anjier and Java...	24
7718..	" " " "	Bark Hudson.....	Valparaiso.....	14
7722..	" " " "	" Rose Inness.....	"	16
7723..	" " " "	" Mary E. Russell....	Brisbane, N. Z.....	15
7724..	" " " "	Ship Alfred D. Snow....	San Francisco.....	30
7725..	Estate E. W. Fletcher, Whitinsville, Mass.....	" Sovereign of the Seas	"	26
7726..	Cong. ch., Southport, Conn., for S. S.	Bark Cambusdoon.....	Amsterdam.....	26
7727..	" " " " for Carrie and Oliver Perry.....	Ship Wm. A. Campbell..	San Francisco.....	24
7728..	Mrs. Louisa A. Schermerhorn, Homer, N. Y.....	Bark Mary E. Reed.....	Rosario.....	14
7729..	S. S. 1st Cong. ch., Nantucket, Mass....	Ship Tillie E. Starbuck..	Portland, Oregon..	30
7730..	Cong. ch., Southport, Conn., for S. S.	Bark Shetland.....	Valparaiso.....	16
7731..	Estate E. W. Fletcher, Whitinsville, Mass.....	" Florence L.....	Sydney, Australia.	14
7844..	Mrs. De Wolf Rogers, Bristol, R. I.....	Schr. Oliver Ames.....	Philadelphia.....	7
7846..	Ladies' Seamen's Friend Society, Concord, N. H.....	Chelsea Hospital, Boston, Mass.....		150
7847..	S. S. Cong. ch., Atkinson, N. H.....	Bark John C. Smith....	New Zealand.....	10
7848..	Sarah Stickney, Lowell, Mass.....	Schr. Henry Lippitt....	New Orleans.....	9
7850..	A Friend, Westhampton, Mass.....	Bark Henry Warren....	Buenos Ayres.....	10
7851..	Belvidere Union Mission School, Lowell, Mass.....	Steamer Alpha.....	Yarmouth.....	20
7852..	Cong. ch., Westhampton, Mass.....	Bark Wave.....	Atlantic Ocean....	28
7854..	Belvidere Union Mission School, Lowell, Mass.....	" Sarah.....	Fayal.....	12
7855..	Mrs. De Wolf Rogers, Bristol, R. I.....	Schr. Parker H. Hooper.		10

QUARTERLY LOAN LIBRARY REPORT.

During May, 1833, forty-one loan libraries, previously sent out, were reshipped from our Rooms at New York and Boston, as follows:—

No. 431,	No. 4,334,	No. 4,919,	No. 5,514,	No. 6,412,	No. 6,979,	No. 7,321,	No. 7,522,	No. 7,834.
" 3,929,	" 4,433,	" 5,027,	" 5,597,	" 6,421,	" 7,015,	" 7,343,	" 7,541,	
" 4,014,	" 4,753,	" 5,272,	" 5,883,	" 6,435,	" 7,162,	" 7,372,	" 7,554,	
" 4,038,	" 4,853,	" 5,488,	" 6,152,	" 6,910,	" 7,245,	" 7,447,	" 7,804,	
" 4,203,	" 4,895,	" 5,488,	" 6,204,	" 6,943,	" 7,289,	" 7,460,	" 7,806,	

SUMMARY.

<i>New Libraries Issued in March, 1833—31</i>				<i>Libraries Reshipped in March, 1833—25</i>			
"	"	April,	" —24	"	"	April,	" —47
"	"	May,	" —27	"	"	May,	" —41
82				113			

THE AMERICAN SEAMEN'S FRIEND SOCIETY'S LOAN LIBRARIES

For seamen, contain, on an average, thirty-six volumes, always including the HOLY BIBLE,—unless it is found, upon inquiry, that the vessel upon which the library is placed, is already supplied with it. Accompanying the Bible are other carefully chosen religious books, and a choice selection of miscellaneous volumes. Each library ordinarily has two or three volumes in German, Danish, French, Spanish, or Italian;—the others are in English. The library is numbered, labeled and placed upon a sea-going vessel leaving the port of New York or Boston, as a loan to the ship's company,—every one being receipted, registered, and then assigned to the donor of the funds which pay for it,—who is thereupon notified of its shipment. For every contribution of TWENTY DOLLARS for that purpose, a library is sent out in the name of the donor.

THEIR RESULTS.

These Loan Libraries have led hundreds of seamen to the Savior of sinners. Individual sailors, entire crews, and very many officers have been made Christians by this agency.—The faith of Christian seamen is fed and quickened by these books.—Their use by individuals, and in meetings for religious service at sea, has been instrumental in promoting the observance of the Sabbath.—They inform and elevate the sailor, mentally.—Relieving the tedium of sea-life, they take the place of indifferent and vile publications.—They change sailors' habits, discouraging profanity and obscenity, and inducing temperance and chastity.—As an issue of these results, a ship's discipline is improved by a library,—safety of life and property is increased, and voyages become, in every way, more certain and profitable.

ERRATA.

IN QUARTERLY LOAN LIBRARY REPORT issued with the SAILORS' MAGAZINE for April, 1833, under the head, "January, 1833,"—library 7,653 should have been thus entered:—

No. of Library.	By whom furnished.	Where placed.	Bound for.	Men in Crew.
7653.	Mrs. H. B. Kaufmann, Plainfield, N. J., for library in memory of Mr. Harry B. Kaufmann	Ship Armenia	San Francisco...	25